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DISCOVERY
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The impact of endometriosis on women's mental health and quality of life – review

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ABSTRACT

Endometriosis is a chronic medical condition where tissue resembling the uterine lining grows outside the uterus, impacting pelvic organs. This ectopic tissue growth results in a variety of symptoms ranging from chronic pain to dysmenorrhea and dyspareunia, predicaments that have a profound impact on daily life quality, leading to an important impairment of its quality (QoL). The condition impacts women in their full-fertile years, occurring in 10% of the population and up to 50% of infertile women—highlighting it as a significant issue for reproductive health and mental well-being. In this review, we examine the impact that endometriosis has on rates of depression, anxiety, and social withdrawal and how emotional stress is further exacerbated by diagnostic delays. This can also create relational distress as the condition often affects sexual health and interpersonal relationships. Good care does not just provide physical management but also psychological and mental health support. Given this, social support and the adoption of adaptive coping strategies among women with endometriosis can help them cope effectively with their disease, increase their emotional resilience, and abandon the use of mental health services. As a result, comprehensive care models that integrate physical health, mental health, and social support may be crucial to improving the QoL of endometriosis-affected women.

Keywords: Endometriosis, Mental health, Quality of life, Depression, Anxiety.

1. INTRODUCTION

Endometriosis is a chronic gynecological disorder characterized by the presence and growth of tissue—similar to the endometrial lining that grows within the uterus each cycle before shedding during menstruation—outside of the uterine cavity on pelvic organs such as ovaries, fallopian tubes, and peritoneum (Burney

and Giudice, 2012; Koninckx et al., 2021). These ectopic endometrial implants respond to hormonal fluctuations, causing inflammation, pain, and the production of scar tissue and adhesions, which can impair the capacity to carry out daily activities (Eskenazi and Warner, 1997). It has been described by symptoms such as dysmenorrhea, chronic pelvic pain, and dyspareunia, which significantly affect QoL in affected women (Rahmioglu et al., 2023).

Endometriosis is a common gynecological condition with incriminating clinical implications that potentially afflicts around 10% of women of reproductive age globally (Burney and Giudice, 2012; Bulun et al., 2019). In fact, among women facing infertility problems, up to 25% to 50% may be affected by endometriosis, illustrating a graded relationship between endometriosis and reproductive health complications (Buck-Louis et al., 2011). Symptoms typically begin in adolescence but are most often diagnosed in women aged 25–35 years old (Bulun et al., 2019). The length of time it takes for a diagnosis is one of the most challenging things about endometriosis. With symptoms being nonspecific and some of the expected pain during menstruation, many women, on average, wait 7 to 11 years before receiving a proper diagnosis (Koninckx et al., 2021).

This diagnostic timeline is also prolonged by the surgical diagnosis requirement (laparoscopy as an invasive procedure) (Eskenazi and Warner, 1997). Even though endometriosis etiology is not completely clear, several hypotheses indicate a complex multifactorial model in which genetic, immunological, hormonal, and environmental components play a key role (Eskenazi and Warner, 1997; Rahmioglu et al., 2023). A well-known hypothesis is retrograde menstruation, in which menstrual blood flows backward through the fallopian tubes into the pelvic cavity; however, it has not been able to explain why only some women develop the disease, so there are other possible biological factors implicated (Burney and Giudice, 2012).

The diversity of symptoms and the often-unpredictable course of the disease contribute significantly to impairing the quality of life in women living with endometriosis. Endometriosis is associated with chronic pain and dysmenorrhea, which lead to high emotional distress in many patients, such as depression, infertility, anxiety, and social isolation (Bulun et al., 2019). A complete understanding of the multifaceted nature of endometriosis and its effects on health in general, mental well-being, and overall quality of life is necessary to ensure that therapeutic approaches are broad enough not only to tackle the physical symptoms but also to meet the psychological and social needs relating to women with this chronic condition.

2. MATERIALS AND METHODS

A thorough literature review was carried out to collect detailed information on how endometriosis affects women's mental health and quality of life. The search utilized databases that included PubMed and PubMed Central. Search terms were strategically selected to capture relevant studies and included “endometriosis”, “mental health”, “quality of life”, “depression”, “anxiety”.

3. RESULTS AND DISCUSSION

Symptoms and Health-related Quality of Life

Endometriosis-associated physical symptoms impair QoL in women since this disease is associated with multiple systemic conditions. Its clinical presentation invariably includes the most common and classical symptom of severe cyclical chronic pelvic pain, which may lead to significant impairment. The widespread chronic pain changes various aspects, including physical mobility and the desire to participate in social life—gathering with friends and doing loads of activities at work—all culminating in a vastly lower rate of life satisfaction (Matasariu et al., 2017).

Dysmenorrhea (painful menstruation) is another common symptom that disturbs daily performance, decreases productivity, and deteriorates the quality of life because experiencing pain for a long time can lead to reduced mental health in women due to the distress of continuous uneasiness (Adoamnei et al., 2021). Additional physical symptoms, such as dyspareunia and fatigue, only add to the burden faced by women with endometriosis. Dyspareunia can be stressful to an intimate relationship, and undisclosed, it may, in some cases, result in emotional injury and psychological pain. Fatigue, in turn, makes the physical problem worse by restricting energy Muharam et al., (2022) and impairing women to balance personal activities with professional jobs.

Moreover, gastrointestinal and urinary symptoms are key to understanding that many women with endometriosis may face the overall complexity burden, which challenges daily life management and affects emotional resilience and social engagement (Pontoppidan et al., 2023). Chronic and multi-component symptoms lead to reduced QoL, as shown in life's physical, emotional, and social aspects. These symptoms are unpredictable and upsetting, with research indicating that due to their extreme nature, there is

evidence that significant social isolation is experienced as a result of symptom severity, leading to women withdrawing from social contact with others for reasons of distress or embarrassment (Mikocka-Walus et al., 2021).

Moreover, work productivity and career promotion are also interfered with by the restrictions physically imposed by poor health due to frequent absenteeism and loss of functional capacities at work (Bień et al., 2020). Together with chronic pain, fatigue, and issues around reproduction, endometriosis weaves an endless web of suffering, both physically and mentally. It reflects a broad range of impacts on multiple life domains. It underlines the importance of treatment that encompasses physical as well as psychological and social aspects of living with endometriosis.

Depression, Anxiety and Endometriosis

Many women with it suffer from impaired mental health, including depression and anxiety. One of the leading causes cited for these mental health conditions is chronic pain and reproductive challenges associated with endometriosis. This condition often causes severe dysmenorrhea, chronic pelvic pain, and dyspareunia, contributing to additional emotional distress in these women, who are also at a greater risk of developing depressive symptoms compared to non-endometriotic patients with similar levels of body mass index. Depression in women affected by endometriosis is significantly common, according to the literature.

Perpetuity of pain and the imposed constraints on daily functioning, social (isolation), professional (career consequences), as well as interactionally are factors that may result in feelings of hopelessness, loss of self-esteem, and loss of life satisfaction (Gambadauro et al., 2019; Waller and Shaw, 1995). Long-term and cyclic pain, furthermore, can make life feel unpredictable to daily reality and create possibly more significant stress alongside emotional exhaustion (Sims et al., 2021). Anxiety is a mental health issue that affects many women with endometriosis. This results in increased anxiety because symptoms will go up and down, and unfortunately, many women experience long delays before getting a diagnosis. Especially the uncertainty of pain and anxiety about fertility problems increases the sense of worry and concern (Walker et al., 1989; Kessler and Bromet, 2013).

Specific to infertility, research highlights how pervasive the anxieties that accompany reproductive difficulties can be given the additional psychological burdens infused by social and relational strains triggered increasingly in a world where we live—and reproduce—longer lives (Cavaggioni et al., 2014; Hansen et al., 2023). Continual experiences of depression and anxiety over time, coupled with physiological changes the body undergoes when they take place simultaneously, can contribute to a sort of feedback loop that exacerbates physical strain associated with endometriosis and transmutes into increased pain sensitivity accompanied by a recurrence in psychological suffering. Findings suggest the potential co-morbidities between physical and mental health and, hence, may inform integrated healthcare approaches for women with endometriosis.

Interventions focused on pain, psychological support, and stress reduction may help relieve both physical and mental symptoms, leading to better QoL (DiVasta et al., 2018; Estes et al., 2021). Complementary treatment approaches that include mental health interventions, like cognitive-behavioral therapy and mindfulness-based interventions, have demonstrated efficacy in decreasing depression and anxiety in women with endometriosis. To enhance the psychological support and quality of life in women with endometriosis, it is necessary to address these modifiable personal resources for them to feel more competent in coping with the multifaceted aspects of their illness (Moreira et al., 2022; Sims et al., 2021).

Influence on Sex and Relationships in Women with Endometriosis

One of those ways is in the effect that endometriosis takes on women and intimate romantic relationships as well as social connections. The data indicate that dyspareunia, pain during or after intercourse, is common among women with endometriosis and can be a significant barrier to having a satisfying sex life (Wahl et al., 2020). Ongoing discomfort and concern about pain in sex often lead to inhibited sexual desire and avoidance behaviors, leading to stress and frustration within a relationship (Young et al., 2018). When compared to those without endometriosis, women with the disease experience sexual dysfunction and have lower levels of sexual satisfaction and frequency (Del-Forno et al., 2023). It is in part because the impacts of endometriosis are not just restricted to physical pain, but they have an impact on relationships, both emotional and intimate.

Men who have partners with endometriosis often describe emotions of sadness, guilt, and fear, reporting that they feel helpless, frustrated, and worried about their partner, which can lead to relational strain and diminished emotional closeness (Young et al., 2016). Indeed, the psychological toll of coping with pain and sexual dysfunction may result in partners feeling emotionally disconnected from one another as both have to deal with it without proper help or communication tools with these issues (De-Ziegler et al., 2010). This

stigma, combined with societal misunderstandings about the condition, only serves to compound endometriosis' effects on sexual health and relationships.

Women living with the condition frequently express feelings of isolation because family members and friends cannot always appreciate how much they struggle, which serves only to reinforce both their sense of alienation and limits reassuring social support (Caruso et al., 2019). Having a network and reducing isolation is important, as research has suggested that social support on its own is associated with fewer physical and emotional symptoms for women living with endometriosis (Shum et al., 2018). Considering the multi-dimensional impact of endometriosis on sexual life and relationships, healthcare providers should be informed to address these aspects as a part of comprehensive care.

Therapeutic interventions with a component of counseling, couple therapy, or support groups can be helpful for women and their partners regarding specific relationship problems secondary to endometriosis (Practice Committee of the American Society for Reproductive Medicine, 2006). Further, women with endometriosis require a holistic approach that addresses physical and psychological support to improve quality of life and relationship satisfaction (Barnhart et al., 2022; Prescott et al., 2016).

Social support and coping strategies

With several studies highlighting the significance of social support in improving mental health and quality of life Denny, (2004), it is clear that women with endometriosis rely heavily on others to deal with the physical and emotional strains associated with the condition. In other words, women with endometriosis who have supportive family members, as well as understanding and empathetic friends or healthcare providers, tend to report familiar (or lower) levels of psychological distress compared to those without vital support systems (Carey et al., 2014). The tangible and intangible aspects of social support not only insulate women from feelings of isolation but also work to cultivate resilience in their journey with the chronic, unpredictable nature of endometriosis (Huntington and Gilmour, 2005).

Participation in peer support groups is a common coping strategy used by women with endometriosis, who attend these groups to engage in experiential sharing, gain information, and receive social validation from other women experiencing similar challenges (Bylinka and Oniszczenko, 2016). Research indicates that peer support groups offer a distinct space where women can recognize they are not isolated in their experiences and challenges (Markovic et al., 2008). These groups might have the potential to be very helpful for promoting adaptive coping as they provide emotional support, practical advice, and a sense of community that is often lacking in their immediate social environments (Andysz and Merecz-Kot, 2020).

The mental health consequences of endometriosis may also take their toll as chronic pain and restrictions can contribute to a sense of helplessness and frustration Denny, (2004), making effective coping strategies that much more vital. For instance, women with endometriosis have been found to reframe their illness experience and find meaning through adaptive coping strategies such as problem-focused coping and cognitive restructuring (Carey et al., 2014). Conversely, avoidant coping mechanisms like suppression and emotional disengagement or withdrawal are less effective for good mental health and are associated with higher levels of anxiety and depression (Markovic et al., 2008).

Supportive psychoeducation can be an integral component of comprehensive care for women with endometriosis (Andysz and Merecz-Kot, 2020). (p.3) Combining social support with coping strategies can prove a powerful weapon to alleviate the mental health status and quality of life for those women living with endometriosis. Due to the positive emotional effects associated with belonging to a support network and receiving coping skills training, healthcare providers might also consider planning for such facets in comprehensive treatment (Huntington and Gilmour, 2005).

Current Research Limitations

Although there are rich insights in the reviewed studies, limitations remain. Most studies are cross-sectional, which may not establish causality between endometriosis and mental health outcomes (Dowding et al., 2024; Kessler and Bromet, 2013). Small sample sizes and heterogeneity in study designs make it challenging to generalize findings (Walker et al., 1989; Hansen et al., 2023). Longitudinal research is also required to learn about the long-term psychological outcomes of FD and intervention effectiveness over time (Waller and Shaw, 1995; Prescott et al., 2016). A gap in the literature appears concerning cultural factors that affect the presentation and course of endometriosis, which may limit our ability to capture all aspects contributing to the global burden of this disease (Bulun et al., 2019; Prescott et al., 2016).

Clinical Practice and Future Research Implications

The results emphasize the importance of taking a broad view and a 'whole person' approach to managing treatments for endometriosis by healthcare professionals. Early diagnosis and treatment are very important for reducing the physical and mental stresses associated with the disease (Koninckx et al., 2021; Eskenazi and Warner, 1997). Mental health assessment should be included as part of routine care, and referrals to mental health services should be made as indicated in women with endometriosis (Sims et al., 2021; Denny, 2004). The development of standardized screening tools for psychological distress in this population might be helpful in improving and enabling earlier identification and treatment (Cavaggioni et al., 2014; Carey et al., 2014).

Consequently, the generalization of findings would also improve in subsequent longitudinal and larger-scale research with more diversity in their populations (Walker et al., 1989; Andysz and Merecz-Kot, 2020). Further investigation into adjunctive national demedicalized, psychological, or social treatment models that may be able to offer nuanced differences in clinical efficacy would help to inform patient and community-centered care at the most efficacious level (Moreira et al., 2022; Practice Committee of the American Society for Reproductive Medicine, 2006). Meanwhile, investigating the cultural, socio-economic, and individual aspects of coping and resilience can provide necessary data for tailoring preventive strategies accordingly (Estes et al., 2021; Huntington and Gilmour, 2005).

4. CONCLUSION

Addressing the broader impact of endometriosis requires an integrated and holistic approach that combines physical symptom management with psychological and social support. Effective treatment strategies should include mental health support, such as counseling and cognitive-behavioral therapy, to alleviate depression and anxiety. Additionally, incorporating social support networks, peer groups, and adaptive coping strategies can enhance resilience and help women better navigate the challenges of endometriosis. In sum, comprehensive care models that address endometriosis's physical and psychosocial dimensions are crucial for improving the overall quality of life for women affected by this complex condition.

Author's Contributions

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Informed Consent

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Conflict of interest

The authors declare that there is no conflict of interests.

Data and materials availability

All data sets collected during this study are available upon reasonable request from the corresponding author.

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